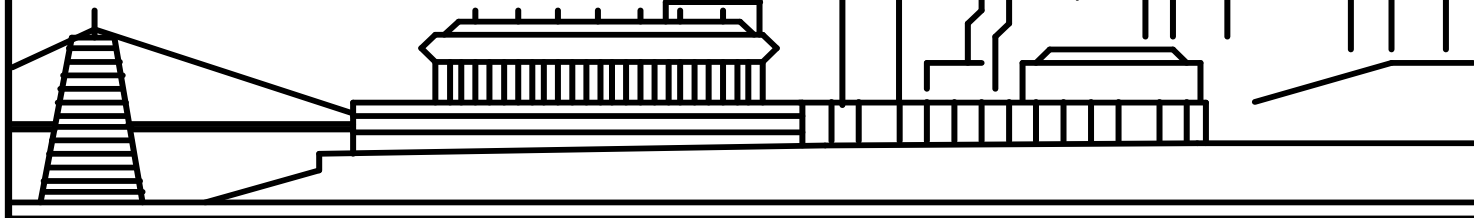




INSTITUTE OF
ELECTRICAL &
ELECTRONICS
ENGINEERS, INC.



MAY 1998

IEEE CINCINNATI SECTION NEWSLETTER

MAY MEETING

DIGITAL AUDIO BROADCASTING IN THE AM BAND

DATE : May 28, 1998

PLACE : Quality Inn Central (Norwood) - See directions on Page 13.

TIME :	5:30 PM (Social Time)	COST:	\$7.00 (Members)
	6:00 PM (Dinner)		\$3.00 (Students)
	7:00 PM (Program)		\$9.00 (Non-Members)
	8:30 PM (Approx.- Adjournment)		

RESERVATIONS ARE REQUIRED FOR DINNER ONLY !!!

THE CINCINNATI SECTION NOW HAS ITS OWN VOICE MAILBOX for making reservations for meetings or for providing comments or suggestions to **YOUR** Executive Committee.

Please call the new, Cincinnati Section Voice Mailbox at 629-9380, by **Noon, Wednesday, May 27, 1998** if you plan to attend. Please leave your **Name** and **IEEE Member Number**.

ABOUT THE MEETING: Xetron Corporation, located in Northern Cincinnati, is developing a digital audio broadcasting system for the commercial AM radio band. The system simultaneously transmits the current analog signal and a hi-fidelity digital signal on the same carrier frequency. Xetron's approach allows broadcasters and listeners to smoothly transition from analog to digital commercial broadcasting. The digital information delivers a stereo audio signal with a bandwidth of 15 kHz and a dynamic range of 72 dB, far exceeding current analog AM broadcast quality. The system has been tested on existing AM stations and several public demonstrations of the technology have been given. A description of the system and an audio demonstration will be presented.

ABOUT THE SPEAKER: David Hartup received the BSEE degree from Purdue University in 1982 and the MSEE and Ph.D. degrees in Electrical Engineering from Georgia Tech in 1983 and 1991, respectively. He has worked in the areas of acoustics and loudspeaker design, signal processing, optical and acousto-optic signal processing, radar systems, and communication systems. He has been with Xetron Corporation in Cincinnati since 1993 working with communication system design and the USA Digital Radio AM In-Band On-Channel Digital Audio Broadcasting system.

CHAIR'S MESSAGE

by Randy Holt, Section Chair

Having our April technical meeting at the Quality Inn Norwood had a trace of deja-vu. Prior to our years at IAMS, this was where we met for both our technical meetings and our Executive Committee meetings. They've definitely improved the facilities since then, and the location is superb. The meal was great, and the cost to the section was about what we had been paying to IAMS for our meetings there.

Having Mike Beebe back in April was again a treat. He's a terrific speaker, funny and full of good information about a wide variety of subjects. His first technical presentation to us earlier this year was on electric vehicles, and this one dealt with crash-test dummies. Did you know that they cost around \$30,000 uninstrumented and approach \$100,000 when all of the load cells, etc., have been added? Because of his connection with the automotive industry in particular, he also talked about the air bag standards. If you were unable to attend, you missed a good show.

The May meeting will feature Dr. David Hartup from Xetron, who will discuss "Digital Audio Broadcasting in the AM Band." Please come and be a part of things!

Don't forget the June golf outing. We decided this year to pay for the dinners for student members who want to come; of course, they must still pay the greens fees!

Your Executive Committee has been arranging a good set of programs for you starting in the Fall. The September meeting will be on the history of computers and presented by some of our local members who have past histories in that industry. We're hoping to have a tour in October and a presentation on hybrid automobiles for the November/December meeting.

Please contact me if you have any suggestions on how we can make your membership in IEEE more beneficial to you. After all, WE ARE YOU!!!

The Personal Computer - Part 6

by Dick Reiman, Historian

The future of the Personal Computer (PC) had past to the hobbyists, and Altair 8800, furnished by Edward Roberts' company MITS, was a big seller in 1971. It offered 65,000 8 bit words of memory, 256 inputs and outputs simultaneously with bus line expansion. No software was offered, so all entries were bit by bit in machine code via toggle switches. A game was sold later.

What Altair needed was more memory, peripherals, but most of all a BASIC interpreter as an internal program. Paul Allen, a programmer working near Boston, bought a copy of Popular Electronics January issue which had publicized the Altair and visited his friend Bill Gates, a Harvard freshman. Allen and Gates telephoned Roberts with an offer to write a BASIC interpreter for Altair. Roberts encouraged them and 6 weeks later Allen flew to Albuquerque with the interpreter which Roberts bought. Gates dropped out of Harvard and later Gates and Allen established the Microsoft Corporation in Bellevue, Washington.

MITS then offered a 4K memory board for \$150 but the first boards were unreliable, and the competition of 30 personal Computer companies were springing up with more sophisticated models. Roberts decided to sell out to Pertec Computer Corporation for \$6.5 million in their stock. Pertec made discs and tape drives for minicomputers and mainframes. By 1979, however, MIMS could no longer compete and went bankrupt.

The Altair inspired many hobbyists to design their own computers including an unconventional self-taught engineer, Stephen W. Wozniak. "Woz", son of a satellite guidance system designer lived in Sunnydale, California. During high school years, he read computer manuals and programming textbooks, and at 13 built a transistorized calculator that won first prize at a science fair. in the Bay Area. Woz found minicomputers, admired their low costs, compactness and accessibility. He wanted to be a computer engineer.

Woz fell in love with snow in Colorado and entered the University of Colorado, then transferred to De Anza College in Cupertino, California. He left school to work as a computer programmer for a small company, and next became an engineer in the calculator division of Hewlett-Packard in Palo Alto. Why study computers when you could make a living designing them?

In the summer of 1971, Woz met a quiet , intense long-haired teenager , Steven P. Jobs and the two became good friends. Like Woz, Jobs was an electronic hobbyist and a student at Woz's old alma mater, Homestead High School in Cupertino. The two joined on an electronic gadget that emitted tones to enable free phone calls to be made. These sold for \$40 to \$150 to friends but were illegal.

Jobs attended Reed College in Portland, Oregon where he read about Eastern religions and became a vegetarian. Returning home, he got a job as a video game designer for Altair. Woz and Jobs would meet in the evenings to play the Altair's video games. With enough money, he traveled to India until the money was gone.

Woz would build his own personal computer with many tips from Jobs and try to interest Hewlett-Packard to manufacture his invention. H-P declined, thinking no attractive market existed. Woz and Jobs would go it alone to found the Apple Computer Company.

A MESSAGE FROM YOUR PACE CHAIRMAN

by Bill Lohner, PACE Chairman

"A Network of Professional Activities for Engineers"

In this issue of the Cincinnati Section Newsletter is an article written by Jack Reed, a member of our PACE committee, to encourage science and math education among pre-college students. Our committee had a session at the OCAS-OMI campus and agreed to publish the article in the Newsletter with the goal of getting help and commitments from our section members (approximately 1000) to promote and encourage more students to participate in math and technical studies. I encourage you to respond and send us information on your interests and how you can contribute. We would like to start some prototype programs this fall. We would appreciate your response.

Bill Lohner
PACE Chairman
(513) 385-7268

A Call to all IEEE Cincinnati Section Members

You have a chance to make important contributions to all for now and the future !

IEEE members have a chance to step from the shadows cloaking unrecognized contributors to share of the lime-light deserved by engineers for "bringing ideas to reality" which bring comfort and national economic leadership. That visibility can come with performing a duty in helping to educate the younger generations to a level that assures the leadership can be sustained.

Hopefully the cover story of the current issue - April 1998 - of SPECTRUM : *The state of Technical Literacy and the Need to Improve the Math and Science Education in the U. S. Schools* caught your attention. It was timely because just before that SPECTRUM was issued, this article was being planned to call for **your assistance** in implementing some prototype programs envisioned after eight months of study by a small group under Section PACE Chairman Bill Lohner.

A clear Action Agenda for Engineers, with many insightful statements, was issued in a multi-colored insert in the July 1997 SPECTRUM that left no doubt about the importance of all members taking part in their locale. The IEEE Precollege Education Committee provides great leadership, resources and networking nationally. Cincinnati Section member Jim Everly is the Region 2 representative on the Committee. Jim received the President's award for creating the Precollege web page which can be viewed at the following URL: <http://www.ewh.ieee.org/cmte/pcollege> . Their Mission and Objective, shown below, are very similar to the goals concluded by the local working group after discussions with many in all levels of the area's educational community.

Mission: To effect improvements in the quality of precollege education and to raise the level of functional and technological literacy of United States Students by placing emphasis on mathematics and science.

Objective: To keep alive the innate curiosity of young children about science as they move into middle school and high school, so that they will continue to study mathematics, science and technology.

Currently, the Cincinnati Section wants to start prototype programs, initially with a limited number of schools, in the following activity areas:

- I. Assist in mentor programs for high school students who are considering careers in engineering, science, or technology.
- II. Assist groups that have an interest in science, math, or technology such as science clubs and fairs, math contests, JETS, Explorer Scouts, minority opportunity groups.
- III. Work with school staffs, PTA and/or other committees to enhance a school's technology capabilities, i.e. computer equipment, software, networking, teacher training or assistance.
- IV. Team with teachers or department heads and fellow engineers to enhance teaching methods, such as developing outlines for student-team "problem-solving" of multi-discipline challenges, with emphasis on middle-school or lower grades to motivate students to pursue the essential subjects which require more effort.

In developing any of these programs and adapting it to a given school, **YOU ARE THE VITAL INGREDIENT** so your interest in that school or district and the talent that you offer most comfortably are very important. After you **respond as requested below**, some round-table sessions or information up-dates about IEEE resources and the education community will be planned.

Please provide some basic information as requested on the form below, or phone with questions or offer comments. **DO NOT RENEGE !! YOU CAN HELP** in the manner or with the school you prefer. **EVERYONE** can have a role: **young engineers** with modern college training and skills; **the practicing engineer** with great specific and professional knowledge; **the retired engineer** with strong fundamentals and a world of experiences. Mixing a little time from each with the synergy from this variety of inputs can yield a

wealth of ideas to make the essential school subjects exciting. Such activity also is a stimulus to the contributing IEEE member.

PLEASE RESPOND WITH YOUR INFORMATION NOW = TODAY, PLEASE

Name: _____ Employer: _____
Address: _____ Function: _____
_____ Zip _____ Activity: _____
Phone - Home _____ Work: _____

Preferred School or District: _____
Preferred Activity Area (circle one or more) I II III IV
Comments (preferred role, similar volunteer efforts/experience, etc.)

Reply To:

BY U. S. Mail:

Bill Lohner
8703 Indianwoods Dr.

BY E-MAIL:

Mike Slupski
mslupski@cinergy.com

PHONES:

Bill Lohner Jack Reed
(513) 385-7268 (513) 231-7831

IEEE NEWS

IEEE-USA Testimony Endorses SAFE Pension Reform

WASHINGTON, March 10, 1998 – The Institute of Electrical and Electronics Engineers - USA (IEEE-USA) backed the Secure Assets for Employees (SAFE) Plan Act (H.R. 1656) in testimony today before the U.S. House Ways and Means Committee Subcommittee on oversight of pension issues. James V. Leonard, vice chairman of IEEE-USA's Engineering Employment Benefits Committee, testified that the SAFE Plan Act would "help expand pension coverage in the rapidly growing, small business sector and, at the same time, offer promising solutions to the vesting, portability, retirement-asset preservation, minimum benefits standards, and administrative complexity problems that IEEE-USA members are concerned about."

Leonard noted that the SAFE Plan would allow qualifying employers with up to 100 employees to establish a retirement plan in the form of an annuity or as a trust. All employees who received at least \$5,000 in compensation from the employer during any two consecutive preceding years and at least \$5,000 in the current year would be eligible to participate. The employer could contribute an amount equal to 1 percent, 2 percent or 3 percent of each eligible employee's annual compensation to the annuity or the trust. Once these contributions have been made, each employee's benefit would be fully and immediately vested.

According to IEEE-USA's Leonard, "The SAFE proposal facilitates pension portability by permitting terminating plan participants to use the assets held in a SAFE trust to purchase a SAFE annuity that will pay the promised benefit at retirement; to make a direct trustee-to-trustee transfer to a subsequent employer's plan; or to transfer the present value of their SAFE assets into a rollover IRA." In addition, argued Leonard, SAFE would protect the real value (purchasing power) of earned benefits by funding employer and employee contributions based on present-year salaries and by providing an opportunity for an enhanced benefit if the SAFE annuity or

trust earns more than 5 percent in any given year. Moreover, he said, "SAFE also ensures preservation of benefits for use in retirement by providing for a direct transfer of SAFE assets to an annuity or to a rollover IRA should participants change or lose their jobs." Finally, "the SAFE proposal includes provisions permitting the accumulation of up to ten years of past service credits and simplified reporting and administrative requirements that should make it a particularly benefit option for small businesses," he stated.

Leonard also addressed the Clinton Administration's Secure Money Annuity or Retirement Trust (SMART) plan, which he noted bears many resemblances to the SAFE Plan. However, he said that a major objection of IEEE-USA is that the SMART proposal would specifically exclude professional-service providers from the plan. "To us, it makes no sense for the Administration to propose a pension coverage expansion proposal that will deprive a growing part of the small-business community of an opportunity to participate in such an important retirement savings plan." Leonard also expressed concern that the President's proposal does not provide for past service credits, which he argued would likely make SMART less attractive than SAFE to many small-business owners.

IEEE-USA Invites Registrations for 1998 Consultants Directory

IEEE-USA has introduced an on-line registration form for its third annual DIRECTORY OF ELECTROTECHNOLOGY AND INFORMATION-TECHNOLOGY CONSULTANTS. Consultants interested in being included in the national print and Web directory have until April 1 to register for the 1998 edition, which will be unveiled by April 31. In 1997, 5,000 print directories were distributed to potential clients in industry and government, and 4,000 queries were logged over the searchable Web database at <www.ieeeusa.org/consultants>. For 1998, the directory offers expanded technical keyword fields and new categories for international consulting and technical language skills. To register by printed form or by computer disk, contact Bill Anderson at 202-785-0017, ext. 330, or w.anderson@ieee.org. To register on-line, see URL <www.ieeeusa.org/usab/BUSINESS/submit.html>. Cost is \$75 (\$50 for IEEE members) for Web or disk registrations, or \$85 (\$60) for print registrations.

Visual Communications -- Three-part Modular Course Prepares Engineers for the Telecommunications Revolution

PISCATAWAY, NJ, February 2, 1998 -- Visual communications is the key element in modern information systems. Spurred on by developments in VLSI technology and the telecommunications revolution, digital documents and video processing are becoming commonplace in our everyday lives.

To prepare engineers for the explosion in visual communications, the Institute of Electrical and Electronics Engineers, Inc. (IEEE), has produced a video series in image and video compression, and transmission algorithms.

Grouped under a common title, Visual Communications, the series consists of three parts:

- Image Coding
- Video Coding
- Image and Video Transmission

A broad audience of engineering professionals can benefit from watching the Visual Communications series. For example, engineers, engineering managers and researchers responsible for visual communications from fax to video will find this series to be a useful educational tool. Network managers and engineers who want a

greater understanding of basic enabling image and video compression methods, as well as transmission engineers responsible for transmitting compressed data from source to destination will also find the videos pertinent and informative.

The first in the series, Image Coding, introduces the basic theory of image coding. It covers concepts of information, entropy, scalar and vector quantization. In addition, it discusses transform and subband/wavelet coding. The viewers will learn the underlying principles of compression algorithms that enable modern image communications such as fax, lossless and noisy coding. Dr. William A. Pearlman of the Rensselaer Polytechnic Institute's Center for Image Processing Research and ECSE in Troy, NY, is the presenter.

The Video Coding module concentrates on video signal processing including spatial and temporal filtering, digital video standards, motion estimation, and compensation. The viewers will learn underlying compression algorithms of modern video communications. Information on video standards from video phone to HTDV is also discussed. IEEE fellow, Dr. John Woods, also of Rensselaer Polytechnic Institute, instructs this module.

The third part of the Visual Communications series focuses on image and video transmission. It presents the effects of channel errors, including channel and network modeling, modulation and channel coding schemes, an information theory perspective, and joint source and channel coding. The audience will learn how to transmit images and videos on wired and wireless channels, as well as on ATM and packet computer networks. In addition, they will learn how to mitigate the effects of channel errors and lost packets. Dr. James W. Modestino who is a professor at the Rensselaer Polytechnic Institute presents the information. Dr. Modestino is also an IEEE fellow.

Educational Activities is now offering Continuing Education Units (CEUs) for video tutorials. The whole series is worth 1.5 CEUs, while each individual module is worth 0.5 CEU. The run time of each module is:

- Image Coding -- 6 hours, 30 minutes
- Video Coding -- 5 hours, 30 minutes
- Image and Video Transmission -- 4 hours, 30 minutes

Each module consists of four videotapes and is accompanied by a set of notes, a text and a final exam.

The videos can be purchased as a whole series or separately. To order:

- the Visual Communications Series; use IEEE NTSC product number: HV6983. PAL number: HV6984. Member price: \$899.00. List price: \$949.00.
- Image Coding; use IEEE NTSC product number: HV6996. PAL number: HV6997. Member price: \$399.00. List price: \$449.00.
- Video Coding; use IEEE NTSC product number: HV6999. PAL number: HV7000. Member price: \$349.00. List price: \$399.00.
- Image & Video Transmission; use IEEE NTSC product number: HV7002. PAL number: HV7003. Member price: \$325.00. List price: \$379.00.

Order the video tutorial from the IEEE Customer Service, 445 Hoes Lane, PO Box 1331, Piscataway, NJ 08855-1331. Make checks payable to IEEE. For single sales, call 1-800-678-IEEE; for company or institutional sales, call 1-800-701-IEEE; or fax 732-981-9667.

**Engineers Learn How To Design And Plan Digital Wireless Networks,
Specify Appropriate Technologies for Particular Environments**

PISCATAWAY, NJ, February 2, 1998 -- Digital wireless technology is experiencing an explosion. From cellular phones to digital media, wireless technology is used in every walk of life becoming the principle method of communication. It is convenient, but only with capabilities that fit the need of a particular setting.

To help those who design, plan, implement, and specify digital wireless networks, the Institute of Electrical and Electronics Engineers, Inc. (IEEE), has produced a video tutorial, *Strategies & Planning for a Wireless Technology System*.

This tutorial will cover critical issues in planning a network, architectural issues in designing a wireless network, and regulatory knowledge. After completing the course, viewers will be able to evaluate alternative wireless services and determine which aspects of wireless technology are suitable for adoption. The students will also be able to recognize the relative merits and drawbacks of competing services.

The tutorial serves as great educational resource for engineers, managers, and executives who need an understanding of modern wireless technology. Presenter Dr. Dhadesugoor R. Vaman suggests that the individuals participating in the course should have prior, general understanding of networks and Open Systems Interconnection (OSI) principles. Dr. Vaman recommends that viewers continue with additional courses in order to learn in more detail about wireless, digital network protocols, performance analysis, and system configuration for a real environment.

Educational Activities is now offering Continuing Education Units (CEUs) for video tutorials. Those who successfully complete the final exam that follows the tutorial will be awarded 0.25 CEU and a certificate of achievement. This course consists of two videotapes, references, and hard copies of the visuals and runs three hours and 13 minutes.

Dr. Vaman is a professor of Electrical and Computer Engineering at the Stevens Institute of Technology, Hoboken, NJ. He also is the founding director of the Advanced Telecommunications Institute (ATI) that was established in 1994 by the US Navy as a center for telecommunications excellence. Dr. Vaman conducts research on such topics as ATM, network management, and digital compression of multimedia signals. He has published numerous articles on the topic of wireless, digital networks. Dr. Vaman is also the chair of the IEEE 802.9 Integrated Services LAN Standards Committee.

To order the video, use IEEE product number: NTCS number: HV7005. PAL number: HV7006. Member price: \$449.00. List price: \$499.00. Order from the IEEE Customer Service, 445 Hoes Lane, PO Box 1331, Piscataway, NJ 08855-1331. Make checks payable to IEEE. For single sales, call 1-800-678-IEEE; for company or institutional sales, call 1-800-701-IEEE; or fax 732-981-9667.

New Self-study Course from IEEE Helps Improve Understanding of Motor Drive Technology

PISCATAWAY, NJ, April 28, 1998 - A high demand for adjustable speed drive (ASD) systems in utility, industrial, and commercial sectors has created an increase in a wide variety of drive applications. This increase in the many drive options poses a potential concern about a lack of sufficient understanding of drive technologies, their benefits, and applications including emerging power quality issues.

To help engineers better understand the capabilities of motor drive technologies, The Institute of Electrical and Electronics Engineers Inc. is offering a self-study course on ASD. This continuing education course, authored by Wayne L. Stebbins, an electrical engineer at Hoechst Celanese, presents general guidelines for the proper selection of ASD systems. "Knowing and understanding these guidelines will help engineers select ASDs that can perform to their optimal level in a specific application," says Mr. Stebbins.

Among many objectives, the course teaches the following:

- AC motor fundamentals
- ASDs used in commercial, industrial, and electric utility applications
- Successful ASD installations
- ASD application fundamentals
- Power quality issues
- ASD project implementation

This course consists of a 13-chapter study guide, a 400-page textbook, and an optional ASD master software. A final examination follows the course. Those who successfully complete the course will be awarded eight Continuing Education Units (CEUs) and the IEEE Certificate of Achievement.

To order this self-study course, use the following product numbers: Including Software HL5741; Member price: \$359; List price: \$499. Without Software HL5750; Member price: \$299; List price: \$399. Order from the IEEE Customer Service, 445 Hoes Lane, PO Box 1331, Piscataway, NJ 08855-1331. Make checks payable to IEEE. For single sales, call 1-800-678-IEEE; for company or institutional sales, call 1-800-701-IEEE; or fax 732-981-9667.

When ordering any of the above videos or the self-study course, please add the following shipping and handling charges: for orders totaling \$1.00 to \$50.00, add \$4.00; \$50.01 to \$75.00, add \$5.00; \$75.01 to \$100.00, add \$6.00; \$100.01 to \$200.00, add \$8.00; over \$200.00, add \$15.00. Call for overseas Air Freight charges. Credit card orders (MasterCard, Visa, American Express, and Diner's Club) are accepted.

"Mentoring In Motion": A Today's Engineer Spring 1998 Preview

Do we need a new mentoring model for engineers? What are the responsibilities of engineering managers and employees to seek mentoring relationships? Do engineers really need mentors at all? These are just a few of the questions answered in the Today's Engineer article "Mentoring In Motion."

The article seeks to address the key issues in the engineering mentoring debate. It explores the underlying need for mentors in this ever-changing work environment, and sets guidelines for the qualities that good mentors should possess. "Mentoring In Motion" sheds light on the very essence of the mentoring relationship itself - as a way to advance the professional performance of the individual in an environment of uncertainty, risk, and dynamic global change - and tailors it specifically to the needs of all engineering professionals.

TODAY'S ENGINEER Gets a Piece of Norman Augustine's Mind

"It's hard to find a field with, I think, greater excitement than engineering. I believe that was particularly true during the last 100 years and is likely to be even more true in the next 100 years." So says Norman Augustine in the Summer 1998 issue of TODAY'S ENGINEER. The former Lockheed-Martin chairman candidly discusses his life, his career and his views on engineers, engineering education and the potential for cooperation and understanding between individuals from different academic backgrounds.

The Newsmakers department in TODAY'S ENGINEER profiles individuals who have not only made noteworthy contributions to the field of engineering, but who have displayed the unique ability to "think outside the cubicle." Norm Augustine would definitely qualify as one of these people. Among his many achievements at Lockheed-Martin, his teamwork principle is one of his fondest legacies. "I think one of the most satisfying things has been the way it's come together as a team of people that work[s] well together and enjoy[s] working well together Most everything we do involves teams of people, and those teams of people have very broad backgrounds."

TODAY'S ENGINEER is a first-of-its-kind magazine dedicated to helping technical professionals transcend traditional boundaries, think strategically, and develop an overall business perspective. Be on the lookout for future articles that will change the way you work and think. To subscribe, call 1-800-678-4333 (1-732-981-0060) and ask for Product No. PB-331. Annual subscriptions are U.S. \$12.95 (overseas shipping additional) for IEEE members. For more information on Today's Engineer, call 1-202-785-0017, ext. 313; send e-mail to ieeusa-magazine@ieee.org; or visit the magazine's Web site at www.todaysengineer.org.

IEEE-USA BACKS PENSION PORTABILITY IMPROVEMENT PROPOSAL

WASHINGTON, March 19, 1998 – Dr. Timothy Grayson, representing the Engineering Employment Benefits Committee of The Institute of Electrical and Electronics Engineers - USA (IEEE-USA), strongly endorsed the new Retirement Account Portability (RAP) Act that was introduced today by Representatives Earl Pomeroy, D-N.D., Jim Kolbe, R-Ariz., and 17 other members of the U.S. House of Representatives.

"Improvements in pension portability -- like the ones in this bill -- are urgently needed to enable increasingly mobile American workers, including engineers and scientists, to take their earned pension benefits with them from job to job, from one employment sector to another and even from one career to another," Grayson said at a Capitol Hill news conference today. He added: "I'm a recent graduate of the University of Rochester, and have already had four jobs in my chosen field. Since college, when I held research and teaching positions, I've worked as a university employee with a 403(b) plan and as a private sector employee with a 401(k) plan. Although I'm looking forward to a long and prosperous career with my current employer, statistical averages indicate that I will change jobs three or four more times before I retire. Unless I can transfer my pension benefits from one employer's plan to another, or roll them into or out of an Individual Retirement Account, I stand to lose a substantial part of my retirement savings."

Grayson cited U.S. Department of Labor research findings that two-thirds of the American workers who participate in employer-sponsored pension plans lose as much as 50 percent of their benefits under current patterns of job mobility and pension coverage. However, he said, the RAP Act will make it easier to transfer earned pension benefits from one employer's plan to another when workers change jobs and from one employment sector to another (e.g., from the public sector to the private sector) if they change careers.

According to IEEE-USA's Grayson, the RAP proposal will also loosen current restrictions on the use of Individual Retirement Accounts as portability vehicles. No matter where they work, individuals will be able to move pension benefits into and out of IRAs should they change or lose their jobs. "Greater freedom of choice and more administrative flexibility will enable more working Americans to save more for retirement -- and keep more of their savings for use in retirement -- as they move in and out of the workplace," stated Grayson.

Grayson praised Congressmen Pomeroy and Kolbe for their leadership in crafting an innovative legislative proposal that he said removes almost all of the current impediments to the transferability of benefits from one defined-contribution plan to another. In addition, he pointed out, the plan also helps to reduce another cause of portability losses by reducing vesting requirements in certain kinds of defined-contribution plans -- since workers also lose pension benefits if they change jobs before earning a vested or irrevocable right to those benefits.

COULD YOU BE A SENIOR MEMBER?

1998 is a great time to be nominating a colleague for Senior Member! Nominate a colleague, not only will the person benefit, but our 1998 Senior Member Initiative provides for a \$10 reward for the entity nominator (Section or Society) for each successful nominee elevated by the end of 1998.

The Senior Member forms have been simplified, and are available via email. Send a blank message to senior-member-forms@ieee.org. You will automatically receive the application/nomination and reference forms by return email. The forms may be submitted via email as well; simply send your completed forms to senior-member@ieee.org. We have also implemented the Senior Member update, which provides contact information of all members elevated to Senior Member grade at the preceding Admission & Advancement meeting. Senior Member is the highest grade for which application may be made; elevation is a distinct honor. The Update is sent to key Region, Section and Society officers so they can congratulate their colleagues. To subscribe, send an email to majordomo@majordomo.ieee.org stating "subscribe sr-member-update {your email alias}" without quotes or brackets.

So... when was the last time you nominated a colleague for Senior Member? Maybe you haven't applied for Senior Member grade? A common misconception is that one has to be towards the end of their career or a "Nobel Prize level" professional to be considered. Senior membership requires that the nominee have 10 years of professional experience (up to five of which may be educational experience) plus five years of significant professional performance. So... why you aren't a Senior Member?

If you prefer to receive printed Senior Member forms or need additional information, send a request to senior-member@ieee.org or mail your request to: IEEE Admission and Advancement Committee, 445 Hoes Lane, PO Box 1331, Piscataway, N.J. 08855-1331.

OBITUARY

Cincinnati Section IEEE member Ralph T. Wehking passed away on March 3, 1998 after a short illness. He was 76. Mr. Wehking joined the IEEE in 1968. He served as Secretary/Treasurer of the Vehicular Technology Group, 1971-1972, Vice Chair/Program Chairman of the Group, 1972-1973, and as Chairman of the Vehicular Tech. Group in 1973-1974. Mr. Wehking served on the Section Executive Board between 1974 and 1978 as By-Laws chairman, Arrangements Chairman, and Special Events Chairman. Mr. Wehking started with the City in May, 1947 as a radio technician in Station X. He retired in September, 1982 as Superintendent of Communications. He graduated with a BS in Management from the University of Cincinnati in 1972 and was a member of Pi Kappa Alpha Fraternity. He also attended the UC College of Engineering before he entered the military in 1942. He served in the Coast Guard in the South Pacific during World War as a radioman aboard LSTs.

NEW MEMBERS

The following individuals are new IEEE members who are in our Section:

EDWARD V. BENTON	KEITH B. DAVIDSON	ANTHONY P. POCHARD
ERIC K. CHAN	KIM HUNTER	WILLIAM R. RUSS
NEAL D. CLEMENTS	RAY A. KELLER	P J. SUNDAHL
CHARLES R. COMBS	KEVIN A. LONEY	CHARLES YOUNG
SUMAN DATTA	INDER MAKIN	CHRISTOPHER H. YOUNG

The following individuals are existing IEEE members who have moved into the Cincinnati Section:

RICHARD K. AFANUH	MICHAEL C. MAYNARD	L. RYAN
JOEL M. HATCH	RICHARD C. REICHEL	PETER NELSON SHADIX
LEONARD S. KIM		

We wish to extend our welcome to all of our Section's new members!!!

**PLENTY OF
PRIZES**

**MEET FELLOW
MEMBERS**

ENTERTAINMENT

CASH BAR!!

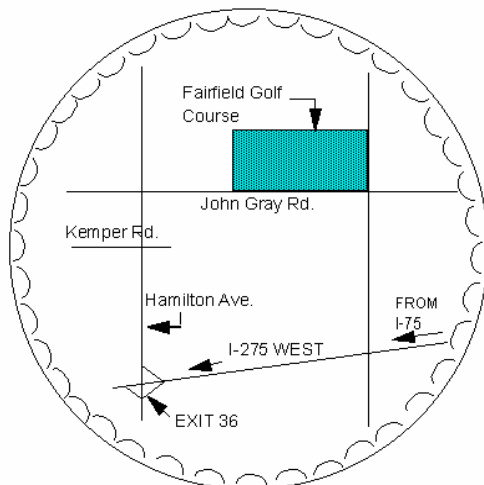
CINCINNATI IEEE SOCIAL EVENT

FRIDAY, JUNE 5, 1998

**AT THE FAIRFIELD GOLF COURSE
(FORMERLY PLEASANT RUN)**

**2200 JOHN GRAY ROAD
FAIRFIELD, OHIO**

- * **SIT DOWN DINNER-**
- NEW YORK STRIP STEAK OR**
- BAKED CHICKEN BREAST**
- * **REDSKIN PARSLEY POTATO,**
- * **BUTTERED CORN & TOSSED SALAD**
- * **COFFEE, TEA, MILK, FREE**
- * **FOUR CONCESSION TICKETS**
- * **THREE HOURS OF:**
- * **BEER & SOFT DRINKS & SNACKS**
- * **DINNER COST: \$20 (MEMBERS)**
- \$32 (NON-MEMBERS)**
- Golf Fees extra**
- (CHECKS PAYABLE TO IEEE, CINTI**
- SECTION)**
- * **IEEE STUDENT MEMBERS WHO PLAY**
- GOLF GET FREE DINNER TICKET**



GOLF COST IS EXTRA!!!

- * **MAKE GOLF RESERVATIONS WHEN YOU**
- MAKE DINNER RESERVATIONS**
- * **TEE TIMES ARE FIRST**
- * **COME FIRST SERVED**
- * **PROVIDE NAMES OF THOSE**
- IN YOUR GROUP- WE WILL**
- COMPLETE FOURSOMES**
- WHEN NECESSARY**
- * **GREENS FEES (INCLUDING**
- SHARED CART): \$38.50**
- * **ALL GOLFERS MUST USE**
- CARTS**
- * **INFORMAL DRESS**
- * **GOLF FEES PAID AT**
- COURSE**
- * **TEE OFF FROM 11AM TO**
- 1:30 PM**
- * **REFRESHMENTS AT 6 PM**
- * **DINNER AT 7 PM**
- * **ENTERTAINMENT/DOOR**
- PRIZES AT 8 PM**

**FOR GOLF/DINNER RESERVATIONS CALL MIKE
CLODFELDER AT (513) 287-1721 OR MAIL TO:**

**M. D. CLODFELDER
CINERGY
P.O. BOX 960, ROOM 625M
CINCINNATI, OHIO 45201**

mclodfelder@cinergy.com

Directions

to meeting: From I-75 or I-71, get off at the Route 562 exit (Norwood Lateral). Then take the Montgomery Road exit off of 562.

Coming from I-71, at the end of the Montgomery Rd. Exit ramp, take a left onto Norwood Ave., follow to stop light and take a left onto Montgomery Rd. Hotel is approximately 2 blocks down on the right.

Coming from I-75, at the end of the Montgomery Rd. Exit ramp, take a left onto Wesley Ave. At next stop sign, turn left onto Norwood Ave. Follow to stop light and take a left onto Montgomery Rd. Hotel is approximately 2 blocks down on the right.

Cincinnati Section Voice Mail (call for meeting reservations)	629-9380
Randy Holt - Chairman	572-5710 (Office), holthr@nku.edu (E-mail)
Bob Haas - Vice Chairman	231-2584, rwhaas.engr@worldnet.att.net (E-mail)
Orest Melnyk - Treasurer	397-5419, o.melnyk@ieee.org (E-mail)
Chris Anderson - Secretary	891-6402, canderso@uceng.uc.edu (E-mail)
Ron Harbaugh - Member-At-Large	352-6202, Ron.Harbaugh@CinPD.RCC.ORG (E-mail)
Laurie Tappel - Member-At-Large	397-6383, ltappel@cinbell.com (E-mail)
Jack Beckmeyer - Arrangements Chairman	353-2643, 353-2671 (Fax)
Bill Lohner - PACE Chairman	385-7268, Ron.Harbaugh@cinphone.rcc.org (E-mail)
Bob Morrison - Editor	287-3697 (Office), 287-4155 (Fax)
	j.r.morrison@ieee.org (E-mail)

MAY 1998
IEEE CINCINNATI SECTION NEWSLETTER



**The Institute of Electrical and
Electronics Engineers, Inc.
C/O Dee Scott
PO Box 53308
Cincinnati, Ohio 45253**

DATED MATERIAL
Please deliver promptly
If undeliverable, please discard